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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,161	03/29/2007	Juergen Eberle	2003P01969WOUS	5081

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INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER

KOAGEL, JONATHAN BRYAN

ART UNIT	PAPER NUMBER
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3744

MAIL DATE	DELIVERY MODE
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03/25/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,161	Applicant(s) EBERLE ET AL.	
	Examiner JONATHAN KOAGEL	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>22 June 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “cut for the throttling tube” in claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use. Applicant does not have the required headings for a proper specification under 37 CFR 1.77(b).

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation “about 5mm to 20mm” and “about 10mm” is unclear to the examiner to what the exact range for distance is. Examiner as best understood interprets this recitation to mean close to or around the range of 5mm to 20mm. See MPEP 2173.05(c).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Electrogeraete FR Publication No. 1,516,944 and further in view of Nocivelli EP Publication No. 0788860.

Regarding claim 7, Electrogeraete teaches in fig. 11, a refrigerating unit comprising a suction tube 41, 42 and a throttling tube 43 which runs at least over a part of its length inside the suction tube 41, 42 and is guided out from the suction tube 41, 42

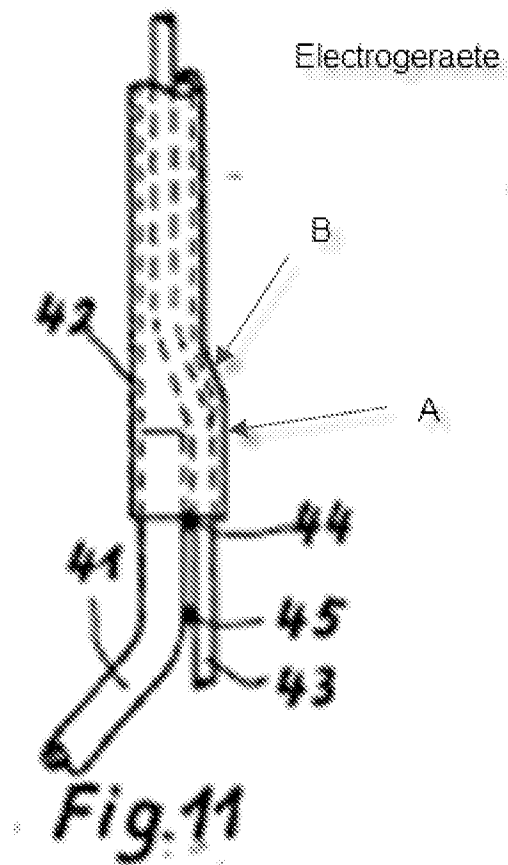
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to form a first outlet location 44 wherein the throttling tube 43 and the suction tube 41, 42 are joined to one another at a second location 45 of the suction tube 41, 42 at which outer surfaces of the throttling tube 43 and the suction tube 41, 42 are in contact, wherein the outer surfaces of the throttling tube 43 and the suction tube 41, 42 are joined to one another at the second location 45 by welding (pg. 4 paragraph 7).

Electrogeraete does not explicitly teach where the weld at the second location is an ultrasound weld. The use of ultrasound welding is very well known in the art.

However, Nocivelli teaches the use of ultrasound welding (column 6 line 23-column 9 line 2).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Electrogeraete with the teachings of Nocivelli to include ultrasound welding in order to utilize an attachment method that has better performance and less costly, as well as providing a protecting superficial coating layer on the components for the prevention of oxidation (Nocivelli column 5 lines 10-12 and column 6 lines 23-31).



Regarding claim 8, Electrogeraete teaches in fig. 11 that the first and second locations, 44 and 45 are spaced apart at a distance. Electrogeraete fails to explicitly teach where the second location is spaced apart from the first location at a range of 5mm to 20mm.

It would have been obvious to one of ordinary skill in the art at the time of invention to space the first and second locations at a range of 5mm to 20mm in order to increase the rigidity of the throttling tube. The addition of a second weld located within this range will prevent damage to the tubes through over flexing during installation. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205, USPQ 215 (CCPA 1980).

Regarding claim 9, Electrogeraete further teaches in fig. 11 wherein the second location 45 is located downstream from the outlet location 44 with reference to the refrigerant flowing in the suction tube 41, 42.

Regarding claim 10, Electrogeraete further teaches in fig. 11, wherein the outlet location 44 is provided at a connecting tube A (labeled by examiner) on which both the suction tube 41, 42 and the throttling tube 43 are fixed downstream in a liquid and gastight manner (pg. 4 paragraph 7). Electrogeraete discloses that the tubes are brazed and welded at the locations 44 and 42. Therefore, the tubes are fixed in a liquid and gastight manner.

Regarding claim 11, Electrogeraete further teaches in fig. 11, wherein the suction tube 41, 42 has an expansion B (labeled by examiner) for the throttling tube 43 in the area of the outlet location 44.

Regarding claim 12, Electrogeraete further teaches in fig. 11, a method for joining a suction tube of a refrigerating unit to a throttling tube comprising the following acts, guiding the throttling tube 43 out from the inside of the suction at an outlet location 44 of the suction tube 41, 42, joining the suction tube 41, 42 and the throttling tube 43 at the outlet location, bringing in contact an outer surface of a portion of the throttling tube 43 located outside the suction tube 41, 42 with an outer surface of the suction tube 41, 42 at a second location 45 of the suction tube 41, 42, joining the suction tube 41, 42 and the throttling tube 43 at the second location 45, joining the outer surfaces of the suction tube 41, 42 and the throttling tube 43 to one another at the second location 45 by welding (pg. 4 paragraph 7). Regarding the joining of the suction tube and the throttling tube at the outlet location by soldering, Electrogeraete teaches an equivalent technique of brazing which allows both the tubes to become joined together by the use of a filler metal which melts and creates a sealed joint. Both brazing and soldering use a filler metal that melts and creates a sealed joint without the melting of the surfaces that are being joined. Electrogeraete fails to explicitly teach the use of ultra sound welding.

However, Nocivelli teaches the use of ultrasound welding (column 6 line 23-column 9 line 2).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Electrogeraete with the teachings of Nocivelli to include ultrasound welding in order to utilize an attachment method that has better performance and less costly, as well as providing a protecting superficial coating layer on the components for the prevention of oxidation (Nocivelli column 5 lines 10-12 and column 6 lines 23-31).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 5,906,694 by Duly discloses the use of ultrasonic welding for a refrigerator for joining and sealing of a copper tube.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN KOAGEL whose telephone number is (571)270-7396. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on (571)272-6681 or Cheryl Tyler (571)272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. K./
Examiner, Art Unit 3744
23 March 2009

/Greg Vidovich/
TQAS, TC 3700